

Remedial Action Contract

U.S. EPA Contract No.: EP-W-09-002

Remedial Action – Phase 1 (Wells Installation)

Work Assignment No:	023-RARA-02PE
	Old Roosevelt Field Contaminated
	Groundwater Area Site
EPA Remedial Project Manager:	Caroline Kwan
CDM Site Manager:	Thomas Mathew, P.E.

Prepared for:
U.S. Environmental Protection Agency
Region 2
290 Broadway
New York, New York 10007-1866

Prepared by:
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Bi-Weekly Progress Report No. 1

Phase 1 – Wells Installation

1.0 Introduction

Pursuant of the Work Assignment Form (WAF) Statement of Work (SOW), for Region 2 Contract EP-W-09-002 Work Assignment 023-RARA-02PE, CDM Federal Programs Corporation (CDM) is performing the Phase 1 (Wells Installation) Remedial Action (RA) at the Old Roosevelt Contaminated Groundwater Area Site. The Bi-Weekly Progress Report is intended to partially fulfill the requirements specified under WAF SOW for this assignment. This Bi-Weekly report is prepared for the work performed from May 3 to 14, 2010.

The primary responsibility of the project geologist was to oversee all drilling and well installation activities to ensure that the work meets all requirements of the final Remedial Design specifications and is performed by the Subcontractor in accordance with all applicable quality assurance, health and safety, and regulatory requirements.

The work completed during this reporting period included mobilizing the drilling equipments, temporary treatment system and trailer to the site, installing temporary chain link fence, locating utilities, installing a decontamination pad, and installing test borehole TB-01 (the same location as extraction well EW-1D). This work is summarized in further detail below. A list of the supporting documentation attached with this bi-weekly progress report is as follows:

- Attachment 1 - CDM's Daily Status Report
- Attachment 2 - CDM's Field Log Book notes
- Attachment 3 - Borehole log
- Attachment 4 - Chain-of-Custody forms
- Attachment 5 - Photo log

2.0 Personnel On-Site

The following personnel were on site during this reporting period:

CDM - Contractor

Thomas Mathew	Site Manager
Ali Rahmani	Project Engineer
Frank Robinson	Project Geologist

Uni-Tech - Driller

Butch Hitzelberger	Head Driller
Brad Barnes	Driller
Joe Gagnon	Driller

Intex – Temporary Water Treatment System

Todd Daniel
Keith Fitzgerald

Utility Survey

Rich Gaymon	Technician
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3.0 Summary of Work Performed

The following is a brief summary of the field activities performed during this reporting period (refer to Attachment 1 for Daily Status Report for individual working day):

- Site mobilization:
 - Uni-Tech mobilized to the site, installed decontamination pad at staging area and dropped off equipment and supplies.
 - Uni-Tech received a shipment of 4 inch stainless steel screen and riser pipes.
 - Uni-Tech received a flat rate water use permit from the Garden City water department.
 - Fencing contractor, National Rent-a-Fence installed temporary fencing by the temporary treatment area, the extraction well locations, and the staging area.
 - ModSpace delivered and installed the CDM site trailer at the staging area.
 - Adler delivered a Frac tank to the temporary water treatment area and the staging area.
 - Freehold Cartage delivered a roll off container to the extraction well location and the staging area location.
 - Mr. John delivered a Port-a-John to the staging area.
 - Eagle Sanitation delivered the dumpster to the staging area.
 - The site sign was installed on the staging area fence.
- Installation of test borehole TB-01
 - Uni-Tech decontaminated the drill rig and all associated equipment, finished setting up on the test boring, TB-01, the same location as EW-1D.
 - Uni-Tech drilled down to 415 feet and completed TB-01 using mud rotary method. Split spoon samples were generally collected at a frequency of 1 every 10 feet from grade to 200 feet below ground surface (bgs), and 1 every 5 feet from 205 to 415 feet bgs. Details can be found in the bore logs (refer to Attachment 3) and the lithologic samples.
 - A 16-inch diameter surface casing was installed from grade to 80 feet bgs by welding each 20 foot section together. The casing was then tremie grouted in place with a cement bentonite grout to grade. The 16-inch diameter surface casing was cut to 1 foot above grade.
 - A total of 27 split spoon samples from TB-01 were selected and sent to Johnson Screens (Uni-Tech subcontract laboratory) for grain size analysis. Grain size analysis results will be used to determine the well screen slot size and filter pack materials for the three extractions wells.
 - TB-01 was temporarily abandoned with #1 and #2 gravel to the bottom of the surface casing, 80 feet below grade. EW-1D will be installed later at this location.
 - Uni-Tech moved the drill rig to the staging area. The drill rig and all associated equipment used at TB-01 were decontaminated.
- Health and Safety
 - A tailgate H&S meeting was conducted before the start of work activities during each working day.
 - While moving the trailer with supplies on it, the Uni-Tech driller (B. Hilzelberger) damaged a car in the parking lot by the extraction well location. The Garden City Police Department responded and wrote up an accident report. The accident was also

reported to CDM and the Uni-Tech office. An incident report was also filed by CDM as a result of this.

4.0 Problems/Corrective Action

1. During installation of 16-inch casing at TB-01/EW-1D, gravel/cobble had fallen to the bottom of 16-inch borehole (approximately 86 to 90 feet bgs). Uni-tech attempted to drill through the gravel/cobble; however, was not successful because gravel/cobble was too big for the mud to circulate it to the surface. In order to remove the gravel, Uni-Tech thinned out the drilling mud and then lowered a 4 inch steel pipe down the borehole with a 1 inch poly hose inside of the 4-inch steel pipe. Compressed air was injected down the poly hose, resulting in a venturi effect pushing the gravel up to the surface. This method successfully removed the gravel down to 102 feet where split spoon sampling commenced.
2. Temporary fence at the staging area, extraction well area and the temporary water treatment system area were damaged over the weekend of May 3rd due to high winds. National Rent-a-Fence repaired all fence on May 10th.

5.0 Deviations

None noted for this period.

6.0 Conclusions

All RA construction work was completed in general accordance with RA Subcontract Documents and approved construction submittals. Minor issues were encountered during this reporting period, all of which were addressed and resolved.

ATTACHMENT 1
DAILY STATUS REPORT

Daily Status Report

PROJECT: Old Roosevelt Field Site

Date: 5-03-10

Day: 01 (Monday)

WEATHER: Rain to overcast

TEMP: 68/84

WIND: Light from the NW

FIELD FORCE			
PERSONNEL ONSITE			
CDM :	Frank Robinson, Thomas Mathew, Muzaffar Rahmani		
Uni-Tech:	Butch Hitzelberger, Brad Barnes, Joe Gagnon		
VISITORS			
TIME	NAME	REPRESENTING	REMARKS
EQUIPMENT IN USE:			
CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:			
-Drillers started to mobilize. Installed decon pad at staging area and dropped off equipment and supplies. -Fencing contractor, National Rent-a-Fence installed temporary fencing by the temporary treatment area and the extraction well locations. -ModSpace delivered and installed the CDM site trailer at the staging area. -Adler delivered a Frac tank to the temporary treatment area. -Freehold Cartage delivered a roll off container to the extraction well location. -Mr.John delivered a Port-a-John to the staging area.			
WORK BEING INSPECTED:			

Daily Status Report (Continued)

PROJECT: Old Roosevelt Field Site

JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN:
TESTING PERFORMED:
PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN:
GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:
COMMUNICATION WITH CONTRACTOR STAFF:
MEETING:
ADDITIONAL ACTIVITIES AND REMARKS:

By: Frank Robinson

Title: Project Geologist

Daily Status Report

PROJECT: Old Roosevelt Field Site

Date: 5-04-10

Day: 02 (Tuesday)

WEATHER: Partly cloudy

TEMP: 60/82

WIND: Moderate from the NW

FIELD FORCE			
PERSONNEL ONSITE			
CDM : Frank Robinson			
Uni-Tech: Butch Hitzelberger, Brad Barnes, Joe Gagnon			
Utility Survey: Rich Gaymon			
VISITORS			
TIME	NAME	REPRESENTING	REMARKS
EQUIPMENT IN USE:			
-Failing 1500 Drill rig.			
-Tender truck.			
-Support truck.			
-Deere 310E backhoe.			
CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:			
-A tailgate H&S meeting was conducted before the start of work activities. See below for details.			
-Uni-Tech: decontaminated the drill rig and all associated equipment, finished setting up on the test boring, TB-01, the same location as EW-1D and drilled down to 30 feet, collecting split spoon samples every 10 feet.			
-Fencing contractor, National Rent-a-Fence installed fencing around the staging area and completed installing the screening around the extraction well fencing.			
-Freehold Cartage delivered a roll off container to the staging area location.			
-The site sign was installed on the staging area fence.			
-Rich Gaymon (Utility Survey) cleared all of the well locations using magnetics and ground penetrating radar. Only one well location at MW-2 had to be moved 6 feet due to electrical lines at the original location.			
-While moving the trailer with supplies on it, the Uni-Tech driller (B. Hitzelberger) damaged a car in the parking lot by the extraction well location. The Garden City PD responded and wrote up an accident report. The accident was also reported to CDM and the Uni-Tech office.			
WORK BEING INSPECTED:			

Daily Status Report (Continued)

PROJECT: Old Roosevelt Field Site

JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN:

-Daily tailgate H&S meeting topics covered:

Slips trips and falls: proper PPE (hardhat, safety glasses, steel toe shoes and safety vest):watch out for traffic in the parking lot when walking or moving vehicles and have a fire watch when performing hot work.

-The Uni-Tech driller damaged a car in the parking lot (see above).

TESTING PERFORMED:**PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN:****GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:****COMMUNICATION WITH CONTRACTOR STAFF:****MEETING:****ADDITIONAL ACTIVITIES AND REMARKS:**

By: Frank Robinson

Title: Project Geologist

Daily Status Report

PROJECT: Old Roosevelt Field Site

Date: 5-05-10

Day: 03 (Wednesday)

WEATHER: Clear

TEMP: 65/77

WIND: Moderate from the South

FIELD FORCE			
PERSONNEL ONSITE			
CDM : Frank Robinson			
Uni-Tech: Butch Hitzelberger, Brad Barnes, Joe Gagnon			
VISITORS			
TIME	NAME	REPRESENTING	REMARKS
EQUIPMENT IN USE:			
-Failing 1500 Drill rig.			
-Tender truck.			
-Support truck.			
-Deere 310E backhoe.			
CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:			
-A tailgate H&S meeting was conducted before the start of work activities. See below for details.			
-Uni-Tech drilled from 40-80 feet using mud rotary, collecting split spoon samples every 10 feet. The borehole was then widened to 20 inches in diameter to install the surface casing pipe. At 64 feet, a valve on the drill rig failed and was replaced with a delay at the end of the day of 2 hours.			
-Uni-Tech received a flat rate water use permit from the Garden City water department.			
-National Rent-a-Fence was on site to finish installing the wind screen on the staging area fence. The total linear feet installed is:			
-542 ft of drive-in fence.			
-708 ft of temporary panel fence.			
-1274 ft of wind screen.			
- 24 ft gate			
WORK BEING INSPECTED:			

Daily Status Report (Continued)

PROJECT: Old Roosevelt Field Site

JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN:

-Daily tailgate H&S meeting topics covered:

Slips trips and falls: proper PPE (hardhat, safety glasses, steel toe shoes and safety vest): watch out for traffic in the parking lot when walking or moving vehicles and have a fire watch when performing hot work.

TESTING PERFORMED:**PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN:**

-Replacing failed valve on drill rig, delay of approximately 2 hours.

GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:**COMMUNICATION WITH CONTRACTOR STAFF:****MEETING:****ADDITIONAL ACTIVITIES AND REMARKS:**

By: Frank Robinson

Title: Project Geologist

Daily Status Report

PROJECT: Old Roosevelt Field Site

Date: 5-06-10

Day: 04 (Thursday)

WEATHER: Partly cloudy

TEMP: 60/82

WIND: Light from the west

FIELD FORCE			
PERSONNEL ONSITE			
CDM : Frank Robinson			
Uni-Tech: Butch Hitzelberger, Brad Barnes, Joe Gagnon			
VISITORS			
TIME	NAME	REPRESENTING	REMARKS
EQUIPMENT IN USE:			
-Failing 1500 Drill rig.			
-Tender truck.			
-Support truck.			
-Deere 310E backhoe.			
CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:			
-A tailgate H&S meeting was conducted before the start of work activities. See below for details.			
-Uni-Tech drilled TB-01(test boring #01) from 64-82 feet with a 20 inch drill bit using mud rotary. The 16 inch surface casing was then installed from grade to 80 feet welding each 20 foot section together. The casing was then tremie grouted in place with a cement bentonite grout to grade.			
WORK BEING INSPECTED:			
-The drill rig and all associated equipment were inspected when they arrived on site on Monday 5/3/10 and all appeared to be in good working order.			
-All material being used by Uni-Tech to date was inspected and meets the submittals approved by CDM. This includes the drilling additive, bentonite grout and cement.			
JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN:			
-Daily tailgate H&S meeting topics covered:			
Slips trips and falls: proper PPE (hardhat, safety glasses, steel toe shoes and safety vest): watch out for traffic in the parking lot when walking or moving vehicles and have a fire watch when performing hot work.			

Daily Status Report (Continued)

PROJECT: Old Roosevelt Field Site

TESTING PERFORMED:
PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN:
GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:
COMMUNICATION WITH CONTRACTOR STAFF:
MEETING:
ADDITIONAL ACTIVITIES AND REMARKS:

By: Frank Robinson

Title: Project Geologist

Daily Status Report

PROJECT: Old Roosevelt Field Site

Date: 5-07-10

Day: 05 (Friday)

WEATHER: Clear

TEMP: 55/70

WIND: Light from the SW

FIELD FORCE			
PERSONNEL ONSITE			
CDM : Frank Robinson			
Uni-Tech: Butch Hitzelberger, Brad Barnes, Joe Gagnon			
VISITORS			
TIME	NAME	REPRESENTING	REMARKS
EQUIPMENT IN USE:			
-Failing 1500 Drill rig.			
-Tender truck.			
-Support truck.			
-Deere 310E backhoe.			
CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:			
-A tailgate H&S meeting was conducted before the start of work activities. See below for details.			
-Uni-Tech cut the 16 inch surface casing for TB-01 to 1 foot above grade, the large mud pit was cleaned out and the small mud pit was installed. 86 feet of drill rod was lowered into the borehole to continue drilling and split spoon sampling. The site was then secured for the weekend.			
WORK BEING INSPECTED:			
JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN:			
-Daily tailgate H&S meeting topics covered:			
Slips trips and falls: proper PPE (hardhat, safety glasses, steel toe shoes and safety vest): watch out for traffic in the parking lot when walking or moving vehicles.			

Daily Status Report (Continued)

PROJECT: Old Roosevelt Field Site

TESTING PERFORMED:
PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN:
GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:
COMMUNICATION WITH CONTRACTOR STAFF:
MEETING:
ADDITIONAL ACTIVITIES AND REMARKS:

By: Frank Robinson

Title: Project Geologist

Daily Status Report

PROJECT: Old Roosevelt Field Site

Date: 5-10-10

Day: 06 (Monday)

WEATHER: Clear

TEMP: 42/60

WIND: Light from the NW

FIELD FORCE			
PERSONNEL ONSITE			
CDM :	Frank Robinson		
Uni-Tech:	Butch Hitzelberger, Brad Barnes, Joe Gagnon		
Intex:	Todd Daniel, Keith Fitzgerald		
VISITORS			
TIME	NAME	REPRESENTING	REMARKS
EQUIPMENT IN USE:			
-Failing 1500 Drill rig.			
-Tender truck.			
-Support truck.			
-Deere 310E backhoe.			
CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:			
-A tailgate H&S meeting was conducted before the start of work activities. See below for details.			
-Due to the high winds over the weekend, the fencing at the staging area, extraction well area and the temporary water treatment area were damaged. National Rent-a-Fence was called and they arrived mid-morning to repair the fencing.			
-Intex mobilized the temporary water treatment system trailer and started to plumb the treatment system.			
-Adler delivered the second Frac tank which was staged in the staging area and will be used to store water/mud used during drilling.			
-Uni-Tech drilled from 86-90 feet and encountered much gravel/cobble that had fallen to the bottom of the borehole during installation of the 16 inch casing. The gravel/cobble was too big for the mud to circulate it to the surface so a junk basket was used to try and clear the borehole of the gravel/cobble. The junk basket was used several times but the gravel/cobble was still blocking the bottom of the borehole. A decision was made to use 4 inch pipe to inject compressed air down the borehole so the gravel/cobble will be removed up through the surface casing.			
WORK BEING INSPECTED:			
JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN:			
Daily tailgate H&S meeting topics covered:			
Slips trips and falls: proper PPE (hardhat, safety glasses, steel toe shoes and safety vest): watch out for traffic in the parking lot when walking or moving vehicles and have a fire watch when performing hot work.			

Daily Status Report (Continued)

PROJECT: Old Roosevelt Field Site

TESTING PERFORMED:
PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN: Approximately 4 hours were lost due to the fence's being damaged over the weekend due to high winds. Uni-Tech had to repair some of the fencing at the extraction well and staging areas to gain access and start their work before National Fence was on-site to repair their fences.
GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:
COMMUNICATION WITH CONTRACTOR STAFF:
MEETING:
ADDITIONAL ACTIVITIES AND REMARKS:

By: Frank Robinson

Title: Project Geologist

Daily Status Report

PROJECT: Old Roosevelt Field Site

Date: 5-11-10

Day: 07 (Tuesday)

WEATHER: Overcast

TEMP: 44/54

WIND: Light from the SW

FIELD FORCE			
PERSONNEL ONSITE			
CDM : Frank Robinson			
Uni-Tech: Butch Hitzelberger, Brad Barnes, Joe Gagnon			
VISITORS			
TIME	NAME	REPRESENTING	REMARKS
EQUIPMENT IN USE:			
-Failing 1500 Drill rig.			
-Tender truck.			
-Support truck.			
-Deere 310E backhoe.			
CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:			
-A tailgate H&S meeting was conducted before the start of work activities. See below for details.			
-Adler delivered the third Frac tank, which was staged in the temporary water treatment area.			
-At TB-01, Uni-Tech thinned out the drilling mud, then lowered a 4 inch steel pipe down the borehole with a 1 inch poly hose inside of the 4-inch steel pipe to remove the gravel from bottom of the borehole. Compressed air was injected down the poly hose, resulting in a venturi effect, which push the gravel up to the surface. This method removed the gravel down to 102 feet where split spoon sampling started.			
-At TB-01, split spoon samples were collected every 10 feet from 102 feet to 200 feet.			
WORK BEING INSPECTED:			
JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN:			
-Daily tailgate H&S meeting topics covered:			
Slips trips and falls: proper PPE (hardhat, safety glasses, steel toe shoes and safety vest): watch out for traffic in the parking lot when walking or moving vehicles and have a fire watch when performing hot work. Also, no smoking, drinking or eating in the exclusion zone is allowed.			

Daily Status Report (Continued)

PROJECT: Old Roosevelt Field Site

TESTING PERFORMED:
PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN:
GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:
COMMUNICATION WITH CONTRACTOR STAFF:
MEETING:
ADDITIONAL ACTIVITIES AND REMARKS:

By: Frank Robinson

Title: Project Geologist

Daily Status Report

PROJECT: Old Roosevelt Field Site

Date: 5-12-10

Day: 08 (Wednesday)

WEATHER: Light rain/drizzle

TEMP: 44/47

WIND: Light from the SE

PERSONNEL ONSITE			
CDM : Frank Robinson			
Uni-Tech: Butch Hitzelberger, Brad Barnes, Joe Gagnon			
VISITORS			
TIME	NAME	REPRESENTING	REMARKS
EQUIPMENT IN USE:			
-Failing 1500 Drill rig.			
-Tender truck.			
-Support truck.			
-Deere 310E backhoe.			
CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:			
-A tailgate H&S meeting was conducted before the start of work activities. See below for details.			
-At TB-01, split spoon samples were collected every 5 feet from 205 feet to 345 feet. A clay/silt layer was found from 223-233 feet and several smaller silt layers were also found. Details can be found in the borehole logs and the lithologic samples.			
-Uni-Tech received a shipment of 4 inch stainless steel screen and riser pipe that will be used for the construction of the monitoring wells. The material will be inspected when the boxes are opened.			
WORK BEING INSPECTED:			
JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN:			
-Daily tailgate H&S meeting topics covered:			
Slips trips and falls: proper PPE (hardhat, safety glasses, steel toe shoes and safety vest): watch out for traffic in the parking lot when walking or moving vehicles and have a fire watch when performing hot work. Also, no smoking, drinking or eating in the exclusion zone is allowed.			

Daily Status Report (Continued)

PROJECT: Old Roosevelt Field Site

TESTING PERFORMED:
PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN:
GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:
COMMUNICATION WITH CONTRACTOR STAFF:
MEETING:
ADDITIONAL ACTIVITIES AND REMARKS:

By: Frank Robinson

Title: Project Geologist

Daily Status Report

PROJECT: Old Roosevelt Field Site

Date: 5-13-10

Day: 09 (Thursday)

WEATHER: Clear

TEMP: 43/66

WIND: Light from the SE

PERSONNEL ONSITE			
CDM :	Frank Robinson		
Uni-Tech:	Butch Hitzelberger, Brad Barnes, Joe Gagnon		
Intex:	Todd Daniel		
VISITORS			
TIME	NAME	REPRESENTING	REMARKS
EQUIPMENT IN USE:			
-Failing 1500 Drill rig.			
-Tender truck.			
-Support truck.			
-Deere 310E backhoe.			
CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:			
-A tailgate H&S meeting was conducted before the start of work activities. See below for details.			
-At TB-01, split spoon samples were collected every 5 feet from 350 feet to 415 feet. This completes TB-01. Details can be found in the bore logs and the lithologic samples.			
- TB-01 was temporarily abandoned with #1 and #2 gravel to the bottom of the surface casing, 80 feet below grade.EW-1D will be installed later at this location.			
-Uni-Tech moved the drill rig off of TB-01 to the staging area where the drill rig and all associated equipment used at TB-01 were decontaminated at the decon pad.			
-Intex was on site to receive a 20 foot storage container and to continue to set up the temporary water treatment system.			
WORK BEING INSPECTED:			
JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN:			
-Daily tailgate H&S meeting topics covered:			
Slips trips and falls: proper PPE (hardhat, safety glasses, steel toe shoes and safety vest): watch out for traffic in the parking lot when walking or moving vehicles and have a fire watch when performing hot work. Also, no smoking, drinking or eating in the exclusion zone is allowed.			

Daily Status Report (Continued)

PROJECT: Old Roosevelt Field Site

TESTING PERFORMED:
PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN:
GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:
COMMUNICATION WITH CONTRACTOR STAFF:
MEETING:
ADDITIONAL ACTIVITIES AND REMARKS: -Dan O'Rourke (CDM) requested that 3 additional split spoon samples be sent to the laboratory for grain size analysis: 50 feet, one sample from 130-150 feet and a clay sample from 223-233 feet.

By: Frank Robinson

Title: Project Geologist

Daily Status Report

PROJECT: Old Roosevelt Field Site

Date: 5-14-10

Day: 10 (Friday)

WEATHER: Overcast/Rain shower

TEMP: 58/70

WIND: Light from the SE

PERSONNEL ONSITE			
CDM : Frank Robinson			
Uni-Tech: Butch Hitzelberger, Brad Barnes, Joe Gagnon			
VISITORS			
TIME	NAME	REPRESENTING	REMARKS
EQUIPMENT IN USE:			
-Failing 1500 Drill rig.			
-Tender truck.			
-Support truck.			
-Deere 310E backhoe.			
CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:			
-A tailgate H&S meeting was conducted before the start of work activities. See below for details.			
-At MW-3S in the staging area the asphalt where the well is to go was removed and the drill rig was set up to start drilling on Monday morning.			
-27 split spoon samples from TB-01 were selected and will be submitted to Uni-Techs laboratory for grain size analysis. The grain size analysis will be used to determine the well screen slot size and filter pack material for the 3 extraction wells.			
WORK BEING INSPECTED:			
-The monitoring well construction material was inspected and meets what was submitted and approved by CDM. This includes the well screen, riser pipe and sumps.			
JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN:			
-Daily tailgate H&S meeting topics covered:			
Slips trips and falls: proper PPE (hardhat, safety glasses, steel toe shoes and safety vest): watch out for traffic in the parking lot when walking or moving vehicles and have a fire watch when performing hot work. Also, no smoking, drinking or eating in the exclusion zone is allowed.			

Daily Status Report (Continued)

PROJECT: Old Roosevelt Field Site

TESTING PERFORMED:
PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN:
GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:
COMMUNICATION WITH CONTRACTOR STAFF:
MEETING:
ADDITIONAL ACTIVITIES AND REMARKS:

By: Frank Robinson

Title: Project Geologist

ATTACHMENT 2
FIELD LOGBOOK NOTES

ORF

RALEPA

7000

5/3/10

Mobilization

0600- F. Robinson on site by # 900

light rain 68°; heavy rain just passed

0635- Thomas Mathew and Ali Rahman
(con) on site

0700- Mr. John Delwood Post-a-John

0750- Adler delivering Frac tank
put in temp treatment area
(near extraction wells)

0945- Fencing contractor on site

1000- Drillers on site: United

1130- 1st roll off on site, by
extraction well location

1150- Modspace delivering site truck

Joe Gagnon - helper

Brad Barnes - helper

Butch Hitzelberger

1230- Driller building de-con pad
by staging location

1400- finished setting up trailer

1500- Leaving site

1515- At Woodbury picking up equipment

1600- Leaving Woodbury
5/3/10

Fek M

ORF

RA/EPA

TB-01

0635- F. Robinson on site

65° Mostly cloudy, winds calm

0700- Drillers on-site: Butch Hitzelberger

Brad Barnes and Joe Gagnon

0740- Fencing Contractor - National-Rent-a-Fence

on site to install staging area fencing.

Uni-Tech equipment.

Hauling 1500 Drill Rig

Tender Truck

Support Truck

Deere 310E Backhoe

0745- Calibrated both instruments:

Mini-Rae 3000 PID and U-Rae multi-meter

both calibrated OK - see calibration log
for details

0810- Uni-Tech decommissioning equipment and rig

0830- Utility locator on site

Rich Gagnon - Utility Survey

0845- Moving out MW-1 cluster by #400

0935- 2nd Roll off delivered to staging area
Kneehold Cartage Inc.

1005- Area around MW-01 cluster cleared

moving to extraction well area

1030- H&S tailgate safety meeting w/ drillers

FR 5/4/10

Tues
5/4/10

ORF

RA/EPA

TB-01

1050- Surface casing pipe being delivered.

Storing pipe at temporary treatment
facility location1110- Extraction well location cleared
of utilities.

1120- At MW-2 cluster: utility clearing

1130- Drill Rig moved into fenced in area

1215- National Fence finished fencing around
staging area, now installing screening
(fencing) around extraction well location.1235- Jackhammering asphalt where the
test boring (TB-01) is to be installed
(EW-10 location)1315 At MW-2 cluster: looking towards
Maggie's left MW OK, right one
had to be moved 6' towards Maggie's due
to electrical lines.1355- Driver (Butch) hit a car in the
parking lot while moving the trailer
through 2 parked cars. Butch was driving
called the police. Called Ali and informed
him about the situation.1415- Thomas Miller called back
will e-mail me the incident report

FR 5/4/10

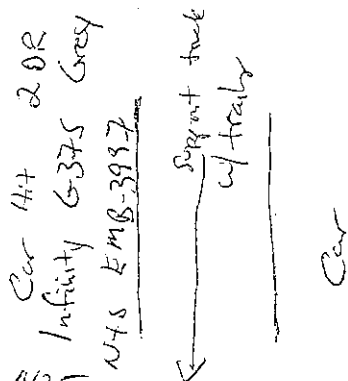
Tues
5/4/10

ORF

RA/SPA

TB-01

Dingane S Accident



hit Left front fender

- 1435 Nassau County Police on scene
 1440 Informed this is Garden City P.D.
 Junction, waiting for them to arrive.
 1450 Garden City PD on site
 1500 MW-3 cluster cleared. No utilities nearby
 1525 Moving tender close to rig by TB-01 (EW-20)
 1535 Mixing mud in mud tub (blue Gold Gel)
 1600 Starting to drill on TB-01
 1615 Collecting 1st split spoon 10-12'
 1635 Rain shower
 1645 Heard Thunder - Shutting down drilled to 35'
 1705 Leaving the site

5/4/10

John M.

ORF

RA/SPA

TB-01

5/5/10

0635 F. Babin on site

Clear 57° winds calm

0700 Uni-Tech on site

Butch Hitzelberger, Brad Barnes, Joe Gagner
 opened hydrant to the east of
 the staging area to flush it as
 requested by the ~~Garden City~~ ^{Harford} Water Authority

0705 Calibrated Mini-Lee 3000 & U-Rae
 successfully. See calibration log for details.

0715 Hydrant flushed, filling tender w/ water

0720 Tailgate H&S meeting w/ Uni-Tech

0735 At Extraction well (test bench) locate
 driller moving equipment around.

0825 Collecting 40-42' Split Spoon

0925 Driller (Butch) went to Garden City
 Water Authority to submit water use permit

1035 Driller back from water authority
 got the permit - flat rate

1100 TB-01 80-82' split spoon collected
 pulling rods to enlarge borehole to
 install 16" steel surface casing

1115 Attached 20" drill bit to clean
 out borehole to install 16" casing

FL 5/5/10

ORF

5/5/10

RA/EPA

TB-01

- 1230- Cleaning out mud pit, alot of gravel
 1330- National Rent-A-Fence on site to
 finish installing wind screen on staging
 area fence
 1430- Down to 44' borehole taking alot of water
 due to gravel layers.
 1500- Total for fencing: 542' Temp fence (staging area)
 708' of temp. panels and 1274' of windscreen
 1618- A valve blew (failed) have a spare and
 replacing it
 Got down to 64'
 1750- Finished replacing valve / cleaning up.
 1755- Leaving the site

5/6/10

Frank R.

ORF

5/6/10

RA/EPA

TB-01

- 0635- Robinson on site
 Mostly Cloudy 58°, winds calm
 0650- Calibrated Minifrac 3000 and Ulrac
 successfully. See calibration sheet for details.
 0700- Uni-Tech on site
 Butch Hatzelburger, Brad Barnes, Joe Gyer
 0705- 11+5, tailgate meeting: prepare PPE.
 watch out for traffic, slips trips & falls.
 0710- Cleaning out mud pit
 0830- Back down to 64', cleaning out borehole.
 0840- welding lifting tabs on 16" riser pipe
 0915- Still cleaning out borehole, alot of big
 pieces of gravel
 1045- Mud very thick, still cleaning out borehole
 1115- Had to bring bit up to the surface, was clogged
 1135- Rain shower
 1220- Down to ~80', will overdrill to 82'
 before setting casing
 1355- Moving 2nd section of 16" riser pipe
 to borehole
~~1310~~ 1410- 1st 20' section of pipe in borehole
 1415- 2nd pipe ready to be welded
 1445- welding 2nd to 3rd pipe
 1455- 3rd section lowered into borehole

FR 5/6/10

ORF

5/6/10

RA/EPA

TB-01

- 1455- NOTE: ① The drill rig and all equipment I inspected before work on Tuesday and all appeared to be in good working order.
- ② All material used by Uni-Tech to date was inspected and meets the submittals approved by CPM. This includes the drilling additive, grout and cement.
- 1500- Welding 3rd + 4th section of pipe.
- 1515- Bottom of 16" casing is at 80'
- 1550- Setting up to traverse grout aug into place with a cement/benbrite grout
- 1615- Mixing 2nd tube of cement/benbrite grout to traverse pipe 80' down at bottom of casing
- 1745- Finished traverse grouting - used 53 bags of cement + 4 bags of benbrite (8 tubes) grouted to grade, will top off tomorrow after it settles out overnight.
- 1750- Remaining rest of traverse pipe and cleaning up.
- 1820- Leaving the site

5/6/10

F. Robinson

ORF

5/7/10

RA/EPA

TB-01

- 0635- F. Robinson on site
- Clear 55° winds light from the west
- 0645- Calibrated Minilog 3000 & URae successfully. See Calibration sheets for details
- 0705- Uni-Tech onsite Bldg Hotel Lager Brad Barnes, Joe Gagon.
- 0710- Tailgate HOS meeting
- Plan is to cut surface casing down, clean out mud tub and bring in small mud tub.
- 0800- Cutting surface casing down
- 0900- Finishing cleaning out by mud pit
- 0905- Grout only settled ~1.5' overnight in TB-01
- 0915- Setting up small mud tube @ TB-01
- 0950- Leveling rig over casing
- 1000- Lowering 86' of drill rod down the borehole
- 1100- The Extractor well location secured for the weekend
- 1120- Drilling area secured for the weekend
- Leaving for the day

5/7/10

F. Robinson

ORF

RALEPA

TB-01

5/10/10

0635- E. Brown on site

Clear 45° winds light & variable

0640- Due to high winds, the fences at the temp. water treatment area and the extraction well areas were knocked over (the fence on the roadway) bent over and broke the orange bottom fence holders.

Also the staging area gate fence was bent over, can't open gate.

0700- Spike to Chris @ Natural Fence about fence falling over

0720- Uni-Tech on site. Patch + Sue + Brad

0735- Todd Daniel + Keith Fitzgerald Intex Environmental Group. Moving the treatment trailer

0740- Intex treatment trailer on site also the 2nd ~~butyl~~ frac tank (Adler)

0750- Treatment trailer in place went to 1st frac tank

0810- 2nd frac tank in staging area

0815- Tailgate H+S meeting

0825- Uni-Tech unloading supplies at staging area

0905- Spike to Rob Saxe @ Natural Fence They will come to repair fence sometime
Jahle 5/10/10

ORF

RALEPA

5/10/10

TB-01

0905 (cont) This morning

0945- Uni-Tech starts to fix fence by drill rig.

1045- Natural Fence on site to repair fences; starting at staging area gate, drills got all of the fence up by extraction area

1210- Natural at extraction well area repairing fence here.

1215- Piped mud from roll-off to holding tank to re-use mud

1230- Drilling down for 86'

1235- Calibrated Minikae 3000 + V Rae successfully
See calibration sheet for details

1310- Still much gravel at bottom of borehole switching to "Junk basket" to remove gravel

1315- Gene Streiter (SeaCoast Env.) on site

1330- Gene S. leaving the site, going to staging area to look at tank + roll-off

1335- Betty aids to install junk basket to remove gravel

1350- Working on fixing treatment area fence
FX 5/10/10

OLF

8/13/19

78-01

Sho/10

1451- Cut away a hole in the Junk build & remove material from inside it.

1451- Junk bucket ~~is empty~~ has some big pieces of gravel in it.

1515- Sealing but bucket down again.

1547- Junk bucket up again.

1610- Daily run 5' to 6' to the next spot

Spot, to mark grade 98-100'

The grade is from Daily to 20" bumble

1650- will be getting 4" pipe & pump around

the pipe to bring the grade up the

16" surface casing

1710- Leaving the site

5/10/19
Frank

OLF

8/13/19

78-01

0637- R. 12500 on site

0647- Gilbert Min. Rec 3000 + 1800

successfully. See collection sheet for details.

Clear 470

0730- Adls on site w/ 3rd Frigate

0735- Uni-Tech on site - want to pick

up 4" pipe

0747- Tailgate H+S meeting

Batch Hitzelberger, Brad Barnes, Joe Gargan

0800- Credentia mud and do sandy mud

to this mud cut. This will make it easier

to remove gravel/cable from bottom of

bumble using the 4" pipe & most compressed

air down and collect/gravel up through

16" surface casing

0857- My mistake. will be using the 4" pipe

as a vent line. Sundry a compressed air pipe

have down the middle of the 4" pipe

and the cable/gravel up the 4" pipe

1000- installed 104' of pipe down the bumble

almost 30' thick - cut, so that mud

gravel in 16" casing

1005- installing 1" poly hose down the inside of

the 4" pipe

5/10/19

OK
8/13/16

78-01

1000 - Clear out mud pit
the borehole - it works
1115 - Starts to air lift sand out of
the borehole - it works
1150 - Down to 102'; gravel around fin
1801 - Borehole
1250 - Collected split from fin 102-104
1600 - Split spc 170-172
1700 - Put split from the day
2000 - 2002; Split every 5' tomorrow
1730 - leaving the site

5/11/16
Franklin

OK
8/13/16

78-01

0635 - F. Albino - On site
Overcast 47° winds light from the west
0650 - Unit Test on site
Bulch H. Bulch and Sue G
0710 - Talgate H. H. H. H. H.
0715 - Setting up to start split spoon
Sampling every 5' from 205' to 415'
0755 - Collecting split spoon 205-207'
0815 - collecting split spoon 210-212'
0840 - Drilling / logging / Reel
0845 - Collecting split spoon 220-222'
1000 - Day / split - sand layer for
223-233
1045 - Collecting split spoon 250-252
1235 - Collecting SS 280-282'
1305 - Collecting SS 295-297'
1405 - Collecting SS 310-312'
1540 - Collecting SS 335-337'
1645 - Collecting SS 345-347'
1700 - Unit Test record as high as
strands steel screen and rope
(411) for use in monitor well construction
will be inspected tomorrow
5/12/16

OK
5/12/16

ORF

5/12/10

RA/EPA

TB-01

1725- Running from the borehole 100'
of drill rods.

1740- Heavy rain

NOTE: Calibrated the instruments before
start of work today. See calibration
sheets for details

5/12/10

F. Brown

ORF

5/13/10

RA/EPA

TB-01

0635- F. Brown on site also

Uni-Tech : Butch H., Brad B. and Joe G.

0645- Calibrated Mini Ra 3000 + VBe
successfully. See calibration sheets for
details.

0650- Tailgate H+S meeting
Clear 48° winds light for the day

0715- Lowering rods down hole to
get down to 350' for 1st split spoon
will be sampling every 5' to the
bottom @ 415'

0735- Down to 350', hole stayed open overnight

0745- Lowering mast to ground surface

0805- Collecting 1st split spoon (SS) at the depth
350-352'

1130- Inter: Todd Daniel on-site
to accept delivery of 20' storage container.

1150- Dan O'Rourke send to add
samples from: 50', 130-150'

also send clay layer 223-233'

1220- Collecting last TB-01 split spoon
at 415-417'

1330 Inter: 20 container on site

1345- Starting to fill the TB-01 borehole

FR 5/13/10

JRF

5/13/10

RA/EPA

TB-01 / Recon

#2

1345 (cont) with #1 Gravel packer
~~EW-010~~ EW-010 will be
 installed at this location. Will be filling

it in to the bottom of the

80' surface casing

1500 - Gravel packer to bottom of
 surface casing

1525 - Clearing out portable mud pit

1535 - Moving rig out of fenced in area

1540 - Moving rig and tender to staging area

1600 - Starting to steam clean drill rig.

1720 - Todd (Intex) leaving

1730 - Finished decommissioning rig and

@ TB01

1540 - leaving the site

5/13/10

FRLH

ORF

5/14/10

RA/EPA

MW-035

0600 - At Woodbury office copying completed
 bore logs (TB-01) and scanned to my
 computer

0650 - At Staging Area

Overcast 58°

0655 - Uni-Tech on site

Butch H., Brad B., Joe G.

0700 - Tailgate H&S meeting

0720 - Steam cleaning mud tub

0755 - Uni-Tech opened the MW castnut
 material and it what was submitted to CDH
 and approved 4" to slot SS screen
 and SS 4" casing.

0850 - Jackhammering MW-35 to set
 drill rig

0910 - Mast up on rig on MW-35

0915 - Went over bore logs and split spoon
 samples with the driller (Butch) and
 selected samples to be submitted for
 grain size analysis. Split the samples
 equally in case something happens to
 the samples en route to the Lab
 Johnson Screen (the Lab) said they
 need ~100 grams of sample
 FRL 5/14/10

ORF

5/17/10

RA/EPA

MW-035

1000- Split the samples and completed
Chain of Custody form. The samples
that are going to the lab are:

215-217	290-292	360-362
225-227	295-297	370-372
230-232	310-312	380-382
235-237	315-317	390-392
245-247	325-327	400-402
260-262	330-332	405-407
270-272	340-342	410-412
280-282	350-352	60-62
285-287	355-357	140-142

a total of ~~25~~ ³⁷ samples

1030- Setting up portable mud pit on MW-35

1045- Starting to run

1115- Uni-Tech leaving the site

1145- Leaving the site

5/14/10

Fahh

ORF

5/17/10

RA/EPA

MW-035

0635- F. Bivum on site

Party Cloudy 5-7' winds calm

0705- Uni-Tech on site

Batch H + Brad B.

0715- Tailgate H&S meeting

0725- Calibrated both Mini-Rae 3000 +
VRae successfully. See calibration sheet
for details

0730- Mixing up drilling mud at MW-035

0740- Starting to drill 8" pilot hole to 80'
then 12" borehole to set 8" surface casing

0750- Have to rebuild the drill rig mud
pump, was giving them problems last
week and have the parts to
rebuild it with them

0915- LI Analytic Laboratory on site (Chris Ortiz)
to drop off bottles for TOC analysis

0950- Filled up bottles w/ samples gave list
as grain size except for 60-62
and 140-142, no sample left for
those 2 intervals. So collected

80-82 and 150-152

1005- LI Analytical leaving the site with
the samples.

FR 5/17/10

**ATTACHMENT 3
BOREHOLE LOG**

Log of Boring

Project Old Roosevelt Field Location Garden City, NY Job. No. _____

Date Drilled 5/4/10 - 5/13/10 Drilling Co. Uni-Tech

Total Depth 415' Method Used Mud Rotary

Inspector Frank Robinson Organic Vapor Instruments Used Minikane 3000 Water Table Depth ~40'

Depth (feet)	Samp. No.	Blows per 6" lbs.	Sample Interval	Adv./ Recov.	Org. Vap. - PPM	Sample Description	Strata Change	Remarks (Time of Day)
10		5-16 25-32	10-12	24 9	Ø	Reddish-brown fine to medium sand little gravel, some fines	SP	
20		7-21 43-50	20-22	24 4	Ø	Same as above	SP	
30		7-7 9-13	30-32	24 Ø	Ø	No Recovery		
40		5-7 33-41	40-42	24 10	Ø	Brown fine to medium sand much gravel	GP	
50		8-17 22-29	50-52	24 8	Ø	Same as above	GP	
60		16-29 25-26	60-62	24 7	Ø	Orange-brown fine sand some fines	SW	

Log of Boring

Depth (feet)	Samp. No.	Blows per 6" lbs.	Sample Interval	Adv./ Recov.	Org. Vap. (PPM)	Sample Description	Strata Change	Remarks (Time of Day)
70		22-27 34-36	70-72	24 8	Ø	orange-brown fine sand much gravel	GP	
80		26-26 32-42	80-82	24 15	Ø	orange-brown fine sand	SW	
90		—	90-92	24 Ø	—	Drilled down to 100' too much gravel to collect split spoon sample		
100		7-17 22-36	100-102	24 16	Ø	reddish-brown to yellowish-brown fine sand w/ fines	SW	
110		22-49 47-53	110-112	24 19	Ø	Blackish-grey sandy silt	SM	
120		17-19 23-27	120-122	24 14	Ø	Same as above	SM	
130		7-7 13-15	130-132	24 3	Ø	tan fine sand no fines	SW	

Log of Boring

Depth (feet)	Samp. No.	Blows per 6" lbs.	Sample Interval	Adv./ Recov.	Org. Vap. (PPM)	Sample Description	Strata Change	Remarks (Time of Day)
140		9-11 15-33	140- 142	24 8	Ø	Orange-black w/ black mottling Fine sand no fines	SW	
150		27-31 37-42	150- 152	24 8	Ø	tan Fine sand no fines	SW	
160		5-7 7-7	160- 162	24 12	Ø	Orange-brown with black fine banding on bottom 6" Fine sand	SW	
170		5-5 7-7	170- 172	24 10	Ø	fine Brown to black bottom 3" Fine sand little fines	SW	
180		18-22 23-21	180- 182	24 3	Ø	Brown fine sand little fines	SW	
190		6-13 13-15	190- 192	24 10	Ø	Greyish-black silty-clay non-plastic (ends at 193')	CL	
200		21-23 31-43	200- 202	24 5	Ø	Greenish-Brown Fine sand little fines	SW	

Log of Boring

Depth (feet)	Samp. No.	Blows per 6 lbs.	Sample Interval	Adv./Recov.	Org. Vap. (PPM)	Sample Description	Strata Change	Remarks (Time of Day)
205		40-49 55-52	205-207	24 9	Ø	tan Fine Sand	SW	
210		33-15 5-5	210-212	24 -	-	No Recovery		
215		7-7 7-7	215-217	24 15	Ø	tan w/ black mottling fine sand to tan fine sand w/ fine	SW	
220		39-42 28-40	220-222	24 6	Ø	orange brown Fine sand -	SW	Silt/clay 223-233
225		7-13 22-28	225-227	24 15	Ø	Dark Grey sandy-silt	SM	
230		27-38 50/4"	230-232	24 12	Ø	Dark-grey silty-clay to Greyish-white Fine sand w/ fines	SM SW	
235		39-44 27-34	235-237	24 14	Ø	3" silty sand (grey) to 3" Grey fine sand to 3" Grey silty sand to Black and grey banded Fine Sand	SM SW SM	

Log of Boring

Depth (feet)	Samp. No.	Blows per 6" lbs.	Sample Interval	Adv./ Recov.	Org. Vap. (PPM)	Sample Description	Strata Change	Remarks (Time of Day)
240		21-23 17-20	240- 242	24 13	Ø	top tan and black fine layers fine sand w/ fines to Bottom tan and orange layers fine sand w/ fines	SW	
245		20-23 27-38	245- 247	24 13	Ø	grey and red rust layers sandy silt	Sm	
250		19-21 27-39	250- 252	24 8	Ø	greenish-brown Fine to medium sand little fines	SP	
255		22-29 50/5"	255- 257	24 7	Ø	same as above	SP	
260		37-48 50/5"	260- 262	24 7	Ø	greenish-brown fine sand some fines	SW	
265		48-62	265- 267	24 6	Ø	same as above	SW	
270		52-60	270- 272	24 6	Ø	same as above	SW	

Log of Boring

Depth (feet)	Samp. No.	Blows per 6" lbs.	Sample Interval	Adv./ Recov.	Org. Vap. (PPM)	Sample Description	Strata Change	Remarks (Time of Day)
275		44-52	275- 277	24 12	Ø	Greenish-grey with red rust interbedded layers Fine sand little fines	SW	
280		49-61	280- 282	24 14	Ø	Charcoal grey silt with fine layering	ML	
285		37 50/6"	285- 287	24 3	Ø	Greenish-brown Fine to medium sand	SP	
290		65 50/3"	290- 292	24 7	Ø	Same as above	SP	
295		51-55	295- 297	24 11	Ø	Greenish-white Silty sand	SM	
300		63-71	300- 302	24 12	Ø	Greenish-brown Fine to medium sand some mica	SP	
305		53-55	305- 307	24 5	Ø	Same as above	SP	

Log of Boring

Depth (feet)	Samp. No.	Blows per 6" lbs.	Sample Interval	Adv./ Recov.	Org. Vap. (PPM)	Sample Description	Strata Change	Remarks (Time of Day)
310		100/6"	310- 312	24 6	Ø	Greenish-white Fine sand no fines	SW	
315		65-70	315- 317	24 5	Ø	Same as above	SW	
320		31-45 50/4"	320- 322	24 9	Ø	Greenish-brown Fine to medium sand some fines	SP	
325		49-71	325- 327	24 7	Ø	Same as above	SP	
330		44-56	330- 332	24 8	Ø	Same as above	SP	
335		44-66	335- 337	24 7	Ø	tan to Greenish-brown Fine sand some fines	SW	
340		21-15 17-21	340- 342	24 8	Ø	Greenish-brown Fine sand to blackish-orange Fine sand w/ mica	SW	

Log of Boring

Depth (feet)	Samp. No.	Blows per 6" lbs.	Sample Interval	Adv./ Recov.	Org. Vap. (PPM)	Sample Description	Strata Change	Remarks (Time of Day)
345		30-18 10-23	345- 347	24 4	Ø	Greenish-brown fine to medium sand some fines	SP	
350		100/6'	350- 352	24 5	Ø	Greenish-brown fine sand	SW	
355		100/5'	355- 357	24 8	Ø	Same as above	SW	
360		75 50/5'	360- 362	24 8	Ø	Same as above tan SW at bottom	SW	
365		32-27 35 50/4"	365- 367	24 11	Ø	Greenish-brown to rust-orange layering to brownish-white at bottom fine sand	SW	
370		49-72	370- 372	24 10	Ø	Greenish-white fine sand some fines	SW	
375		21-10 10-10	375- 377	24 10	Ø	Greenish-white to orange at bottom fine sand	SW	

Log of Boring

Depth (feet)	Samp. No.	Blows per 6" lbs.	Sample Interval	Adv./Recov.	Org. Vap. (PPM)	Sample Description	Strata Change	Remarks (Time of Day)
380		8-10 22-34	386-382	24/7	Ø	tan Fine sand	SW	
385		33-37 41-49	385-382	24/14	Ø	tan and greenish-brown layers (2" each) bottom orange and red thin banding 1/2" each Fine sand	SW	
390		18-20 21-22	390-392	24/7	Ø	Greenish-white fine sand	SW	
395		17-17 21-25	395-392	24/11	Ø	Greenish-brown 2 2" orange rust layers fine sand	SW	
400		17-20 23-23	400-402	24/6	Ø	Greenish-brown Fine sand	SW	
405		80 54	405-402	24/9	Ø	Greenish-brown Fine to medium sand	SP	
410		41-42 50 15"	410-412	24/15	Ø	Charcoal grey Silt	ML	
						out of silt @ 413'		

ATTACHMENT 4
CHAIN-OF-CUSTODY FORM

CHAIN OF CUSTODY / ANALYSIS REQUEST

Page 1 of 3

Name (for report and invoice) <u>Frank Robinson</u>		Samplers Name (Printed) <u>Frank Robinson</u>		Site/Project Identification <u>Old Reservoir Field</u>																
Company <u>COM</u>		P. O. #		State (Location of site): NJ: <input type="checkbox"/> NY: <input checked="" type="checkbox"/> Other:																
Address		Analysis Turnaround Time Standard <input type="checkbox"/> Rush Charges Authorized For: 2 Week <input type="checkbox"/> 1 Week <input type="checkbox"/> Other <input type="checkbox"/>		ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE REQUEST)																
City		State		LAB USE ONLY																
Phone		Fax		Project No:																
				Job No:																
				Sample Numbers																
Sample Identification		Date	Time	Matrix	No. of Cont.															
TB-01 60-62'		5/5/10		Soil	1	X														
TB-02 140-142'		5/11/10		Soil		X														
TB-01 215-217		5/12/10				X														
TB-01 225-227						X														
TB-01 230-232						X														
TB-01 235-237						X														
TB-01 245-247						X														
TB-02 260-262						X														
TB-01 270-272						X														
TB-02 280-282						X														
Preservation Used: 1 = ICE, 2 = HCl, 3 = H ₂ SO ₄ , 4 = HNO ₃ , 5 = NaOH 6 = Other <u>None</u> , 7 = Other					Soil: <u>6</u>															
					Water:															

Special Instructions

Water Metals Filtered (Yes/No)?

Relinquished by <u>Frank Robinson</u>	Company <u>COM</u>	Date / Time <u>5/11/10 1100</u>	Received by <u>[Signature]</u>	Company <u>UTD</u>
Relinquished by 2)	Company	Date / Time	Received by 2)	Company
Relinquished by 3)	Company	Date / Time	Received by 3)	Company
Relinquished by 4)	Company	Date / Time	Received by 4)	Company

Special Instructions

Relinquished by <i>[Signature]</i>	Company <i>Con</i>	Date / Time <i>5/10/10 11:00</i>	Received by <i>[Signature]</i>	Company <i>UTI</i>
Relinquished by 2)	Company	Date / Time 	Received by 2)	Company
Relinquished by 3)	Company	Date / Time 	Received by 3)	Company
Relinquished by 4)	Company	Date / Time 	Received by 4)	Company

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132).

TAL - 0016 (0408)

Massachusetts (M-NJ312), North Carolina (No. 578)

[illegible]

Special Instructions

Relinquished by J. K. Mc	Company COM	Date / Time 11/10/10 11:00	Received by K. P. King	Company LFE
Relinquished by 2)	Company	Date / Time 	Received by 2)	Company
Relinquished by 3)	Company	Date / Time 	Received by 3)	Company
Relinquished by 4)	Company	Date / Time 	Received by 4)	Company

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132).

TAL - 0016 (0408)

Massachusetts (M-NJ312), North Carolina (No. 578)

CHAIN OF CUSTODY / REQUEST FOR ANALYSIS DOCUMENT

CLIENT NAME/ADDRESS <i>San Jose</i>		CONTACT: _____		SAMPLER (SIGNATURE) _____		DATE _____		TIME _____		SAMPLE(S) SEALED YES / NO		LABORATORY CHAIN ID # (FOR LAB USE ONLY)			
		PHONE: _____		SAMPLER NAME (PRINT) _____		DATE _____		TIME _____		CORRECT CONTAINER(S) YES / NO					
		FAX: _____													
PROJECT LOCATION: <i>Old Town Hall</i>										SAMPLES RECEIVED AT °C		ANALYSIS REQUIRED <i>LOE</i>			
TERMS & CONDITIONS: Accounts are payable in full within thirty days, outstanding balances accrue service charges of 1.5% per month. Tendering of samples to LIAL for analytical testing constitutes agreement by buyer/sampler to LIAL's Standard terms															
LABORATORY ID # <small>For Laboratory Use Only</small>	MATRIX	TYPE	PH	RES. CHLORIME	PRES.	DATE	TIME	SAMPLE # LOCATION						# OF CONTAINERS	
1.															
2.															
3.															
4.															
5.															
6.															
7.															
8.															
9.															
10.															
11.															
12.															
13.															
14.															
MATRIX: S=SOIL; SL=SLUDGE; DW=DRINKING WATER; A=AIR; W=WIFE; PC=PAINT CHIPS; BM= BULK MATERIAL, O=OIL, WW=WASTE WATER TYPE: G=GRAB; C=COMPOSITE; SS=SPLIT SPOON PRES: (1) ICE; (2) HCL; (3) H ₂ SO ₄ ; (4) NAOH; (5) Na ₂ S ₃ O ₃ ; (6) HNO ₃ ; (7) OTHER								TURNAROUND REQUIRED: <input checked="" type="checkbox"/> NORMAL <input type="checkbox"/> STAT		COMMENTS / INSTRUCTIONS					
RELINQUISHED BY (SIGNATURE)		DATE		PRINTED NAME		RECEIVED BY (SIGNATURE)		DATE		PRINTED NAME					
RELINQUISHED BY (SIGNATURE)		DATE		PRINTED NAME		RECEIVED BY SAMPLE CUSTODIAN		DATE		PRINTED NAME					

CHAIN OF CUSTODY / REQUEST FOR ANALYSIS DOCUMENT

CLIENT NAME/ADDRESS <i>White Office / Canary Lab</i>		CONTACT:		SAMPLER (SIGNATURE) <i>[Signature]</i>		DATE		TIME		SAMPLE(S) SEALED YES / NO		LABORATORY CHAIN ID # (FOR LAB USE ONLY)							
		PHONE:		SAMPLER NAME (PRINT) <i>John Doe</i>		DATE		TIME		CORRECT CONTAINER(S) YES / NO									
		FAX:																	
PROJECT LOCATION: <i>Cellar in White Office</i>										SAMPLES RECEIVED AT <div style="border: 1px solid black; padding: 5px; display: inline-block;">°C</div>		ANALYSIS REQUIRED <i>1.0</i>							
TERMS & CONDITIONS: Accounts are payable in full within thirty days, outstanding balances accrue service charges of 1.5% per month. Tendering of samples to LIAL for analytical testing constitutes agreement by buyer/sampler to LIAL's Standard terms																			
LABORATORY ID # <small>For Laboratory Use Only</small>	MATRIX	TYPE	PH	RES. CHLORINE	PRES.	DATE	TIME	SAMPLE # LOCATION											
1.	S	G				sludge		REF 70-01 320-332	✓										
2.	S	G				sludge		REF 70-01 340-342	✓										
3.	S	G				sludge		REF 70-01 350-352	✓										
4.	S	G						REF 70-01 365-367	✓										
5.	S	G						REF 70-01 360-362	✓										
6.	S	G						REF 70-01 370-372	✓										
7.	S	G						REF 70-01 380-382	✓										
8.	S	G						REF 70-01 390-392	✓										
9.	S	G						REF 70-01 400-402	✓										
10.	S	G						REF 70-01 405-407	✓										
11.	S	G						REF 70-01 410-412	✓										
12.	S	G				sludge		REF 70-01 10-12	X										
13.	S	G				sludge		REF 70-01 150-152	X										
14.																			
MATRIX: S=SOIL; SL=SLUDGE; DW=DRINKING WATER; A=AIR; W=WIPE; PC=PAINT CHIPS; BM= BULK MATERIAL, O=OIL, WW=WASTE WATER TYPE: G=GRAB; C=COMPOSITE; SS=SPLIT SPOON PRES: (1) ICE; (2) HCL; (3) H ₂ SO ₄ ; (4) NAOH; (5) Na ₂ S ₃ O ₃ ; (6) HNO ₃ ; (7) OTHER							TURNAROUND REQUIRED: <input checked="" type="checkbox"/> NORMAL <input type="checkbox"/> STAT BY <i>/ /</i>		COMMENTS / INSTRUCTIONS										
RELINQUISHED BY (SIGNATURE) <i>[Signature]</i>		DATE TIME		PRINTED NAME <i>K. White</i>		RECEIVED BY (SIGNATURE) <i>[Signature]</i>		DATE TIME		PRINTED NAME <i>[Name]</i>									
RELINQUISHED BY (SIGNATURE)		DATE TIME		PRINTED NAME		RECEIVED BY SAMPLE CUSTODIAN		DATE TIME		PRINTED NAME									

ATTACHMENT 5
PHOTO LOG

PHOTOS 05-04-10



P1010001.jpg Extraction well locations prior to drilling



P1010002.jpg Site sign installed on staging area fence



P1010003.jpg Damage to car caused by driller

PHOTOS 05-05-10



P1010001.jpg8 f]`b[`UhH6 !\$%fHYgh6 cf]b[`%'UhYl fUW]cb'k Y`~cWU]cb



P1010002.jpgH6 !\$%gd`]hgdc cb'gUa d`Y`Zca `* \$!* &ZYh

PHOTOS 05-06-10



P1010001.jpgHYa dcfUfmiifYUa YbIgmghYa ``cWUjcb`k]h `cbY: fUWHUb_



P1010002.jpgGHUj]b[`UfYUZYbWU`UbX`k]bX`gWYYb`Vt`a d`Yhf`m]bghU`YX



P1010003.jpg@k Yf]b['ZfghgYW]cb'cZ% ']bW 'WUg]b['d]dY']b'H6!\$%



P1010004.jpgK YX]b['&'gYW]cbg'cZ% ']bW 'WUg]b['d]dY']b'H6!\$%

PHOTOS 05-07-10



P1010001.jpgGa U``a i X'd]hgYhi d'cb`H6!\$%

PHOTOS 05-10-10



P1010001.jpg*****GHU jbl 'UFYU[UHYXUa U[YX'VmH Y\ J[\ 'k]bXg'cj Yf'H Yk YY_YbX



P1010002.jpg*****9l fUWjcb'k Y''UFYUZybW'XUa U[YX'VmH Y\ J[\ 'k]bXg'cj Yf'H Yk YY_YbX



P1010003.jpg*****HYa dcfUfmiFYUfa YbhUfYUZybW'XUa U[YX'VmiH Y\][\ 'k]bXg'cj Yf'H Y'k YY_YbX



P1010004.jpg*****>i b_`VUg_Yhi gYX'UiH6!\$%lc'fYa cj Y[fUj Y

PHOTOS 05-11-10



P1010001.jpg.....H jfX': fUWHUb_`ghUj YX`jb`h YhYa dcfUfmk UHYf`fYUfa YbhiUfYU



P1010002.jpg.....FYa cj]b['[fUj Y`Zca `H6!\$%i g]b[`Uj Ybhi fY`Uf``]ZignghYa



P1010003.jpg''''''; fUj Y`fYa cj YX`Zca `H6!\$%VcfY c`Y

PHOTOS 05-13-10



P1010001.jpg.....8 f]~]b['H6!\$%UhYI fUWjcb'k Y``UfYU



P1010002.jpg.....H6!\$%gd`]hgdccb'gUa d`YZca `&) !& , +ZYh



P1010003.jpg..... ßhM ' &\$`ZYhgtcfU[Y`WëbHJbYf`Jb`Hya dcfUrmik UHf`HfYUfa YbhUfYU



P1010004.jpg.....: J`]b[`H6!\$%Vcf\ c`Yk]R` , %[fUj Y`



P1010005.jpg.....8 YW6bHLa]bU]b['h Y'Xf]'`f][]b'h Y'ghL[]b['UfYU

PHOTOS 05-14-10



P1010001.jpg*****AK !' G`cWUjcb`VYZfYXf`]b[



P1010002.jpg***** (`jbW `ghUjb`Ygg ghYY`f]gYf`d]dY`Zf`AK `Wcbgfi Wjcb



P1010003.jpg.....('jbW 'gHJb`Ygg'ghYY`%\$'g`chigWYYb`UbX'('jbW 'gHJb`Ygg'ghYY`gi a dg`Z:f`
.....AK`W`bgfii`Wjcb



P1010004.jpg.....8f)`f]['gYhi d'cb`AK`!`Gjb'gHJ[]b[`UfYU